

Listing of Claims:

Please make the following amendments to the specification (material to be inserted in replacement paragraphs or sections is in **bold and underline**, and material to be deleted is in ~~strikeout~~ or (if the deletion is of five or fewer consecutive characters or would be difficult to see) in double brackets [[]]). In brief, applicants have canceled claims 21-49, in response to the restriction requirement.

1. (Original) A microplate for holding a plurality of samples, the microplate comprising:

a frame; and

a plurality of sample wells disposed in the frame, at least one sample well having a wall capable of transmitting light, a portion of the wall having an inner surface and an opposing outer surface, wherein the inner and outer surfaces are not parallel.

2. (Original) The microplate of claim 1, each sample well having a wall capable of transmitting light, the wall having an inner surface configured to contact a sample held within the sample well and an outer surface capable of transmitting light incident on the outer surface to the inner surface, wherein at least a portion of the inner surface is substantially flat, and wherein at least a portion of the outer surface makes an angle greater than about 42° degrees with respect to the substantially flat portion of the inner surface.

3. (Original) The microplate of claim 1, the wall having an index of refraction, wherein the angle is chosen so that light incident on at least a portion of the outer surface along a normal to that portion of the outer surface will be totally internally reflected at the inner surface when the sample well is empty.

4. (Original) The microplate of claim 1, the wall having an index of refraction, wherein the angle is chosen so that light incident on the outer surface along a normal to the outer surface will be totally internally reflected at the inner surface when the sample well contains water.

5. (Original) The microplate of claim 1, the wall having an index of refraction, wherein the index of refraction is at least about 1.3.

6. (Original) The microplate of claim 1, the at least one sample well including a side wall and a bottom wall joined to the side wall, wherein the bottom wall is the wall capable of transmitting light.

7. (Original) The microplate of claim 6, the side wall having an inner surface, wherein the inner surface of the side wall and the inner surface of the bottom wall form a frustum of cone having a cone angle of at least about 8 degrees.

8. (Original) The microplate of claim 1, the outer surface forming a frustum of cone.

9. (Original) The microplate of claim 1, the outer surface forming at least a portion of a spheroid, ellipsoid, or paraboloid.

10. (Original) The microplate of claim 1, wherein the inner surface includes a coating capable of increasing the penetration of the evanescent field into the sample well.

11. (Original) The microplate of claim 1, the at least one sample well having an open end through which sample may be added or removed, wherein the wall capable of transmitting light is opposite the open end.

12. (Original) The microplate of claim 1, wherein the at least one sample well is radially symmetric.

13. (Original) The microplate of claim 1, wherein the frame is substantially rectangular.

14. (Original) The microplate of claim 1, wherein the wall capable of transmitting light includes at least one of the following compositions: plastic, glass, and fused silica.

15. (Original) The microplate of claim 1, wherein the wall is formed of a composition that substantially maintains the polarization of incident light.

16. (Original) The microplate of claim 1, wherein the frame is configured to function as a wave guide, so that multiple internal reflections may be used to create simultaneous evanescent fields adjacent the inner surfaces of at least two sample wells.

17. (Original) The microplate of claim 1, wherein the microplate includes at least about 384 sample wells.

18. (Original) The microplate of claim 1, wherein each sample well holds no more than about 55 microliters.

19. (Original) The microplate of claim 18, wherein each sample well holds no more than about 5 microliters.

20. (Original) The microplate of claim 1, wherein the thickness of the wall capable of transmitting light is not uniform.

21-49. (Canceled)

50. (Original) A microplate for holding a plurality of samples, the microplate comprising:

a frame; and

a plurality of sample wells disposed in the frame, at least one sample well having a wall capable of transmitting light, the wall having a nonuniform thickness that provides an optimal angle of incidence of incoming light through an outer surface of the well and total internal reflection at an opposing internal interface in the well.